

REASONS FOR ALLOWANCE

Allowable Subject Matter

Claims 1, 3-6, 8-16, 18-25 and 27 allowed.

The following is an examiner's statement of reasons for allowance: The prior arts of record fail to disclose an apparatus and method for synchronizing uplink and downlink transmission in a terminal of a mobile communication system, comprising a receiving unit receiving and converting an RF signal, a processing unit recognizing a construction of uplink time slots and downlink time slots from the converted RF signal, a transmitting unit transmitting a data signal, a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point, the recognized construction of uplink time slots and downlink time slots, and an actual signal processing time of the transmitting unit, and a switching unit switching between the receiving unit and the transmitting unit according the new switching point, wherein the transmitting unit transmits the data signal with a variable delay based on the new switching point.

Lee discloses synchronization of uplink and downlink transmission of a mobile device, receiving a synchronization signal from a base station and processing the synchronization signal, recognizing an uplink time slot and downlink time slot and determining a new transmission point based on the determination of the uplink time slot, the downlink time slot, the new transmission point and transmission round trip delay, but fail to disclose determining a new switching point based on an actual signal processing time of the transmitting unit and the transmitting unit transmits the data signal with a variable delay based on the new switching point. Burke cures the deficiency of variable delay in transmission time to adjust for transmission delay caused by

distance variation, but unable to cure Lee's deficiency of determining a new switching point based on detected current switching point, the recognized construction of uplink time slots and downlink time slots, and an actual signal processing time of the transmitting unit.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Benson (2005/0041605 A1) discloses uplink downlink synchronization.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LAI whose telephone number is (571)270-1208. The examiner can normally be reached on Monday-Thursday 9:00 AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L./
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617